INFLUENCE OF PLACE OF BIRTH AND GENDER ON THE HEALTH COMPONENT OF THE QUALITY OF LIFE OF STUDENTS

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Annotation.. *Purpose:* to analyze indicators of physical and mental health components in quality of life of students according to gender and place of birth. *Material*: the study involved 513 students aged 17 - 22 years old. Depending on the place of birth of the students were grouped into 5 groups: residents of large cities, small cities, towns, and villages; sat. *Results*: the highest rate of physical activity in girls (91.75 points) and men (94.9 points) of the major cities. The lowest rates are indicator role activities (47.86 points) girls from small towns, vitality index (57.25 points) in men hail from towns. The correlation coefficients between the indicators of quality of life of students: high rates of mental health component in comparison with the physical component. *Conclusions*: it was found that students regardless of sex, physical health component above the psychological component. Gender difference between physical health component is greater among residents of the town. In terms of mental health component of the residents of small towns.
Keywords: health, quality of life, students, place of birth, sex.

Introduction

Characteristic of population's life quality in narrow meaning can be given with the help of direct health indicators: morbidity, mortality, expected span of life. Though in wide sense, it is necessary to study such life quality aspects, which directly influence on human health. Alongside with general indicators self feeling belongs to such indicators [6].

There exist many approaches to researching of life quality: social- [3; 13], psychological [9; 14], medical 2; 8; 11; 15]. In scientific works still more attention is paid to characteristics of a person, his (her) emotions, inner state[1; 7; 16]. There are a lot of works, in which theoretical-methodic foundation of life quality of different population's strata is given [9; 10; 17-20].

Among many factors, influencing on level of population's life in general and on quality of life in particular there are marked out two big groups: factors-characteristics of population itself and factors of environment. Among the latter, one of the most important is type of residential area. This factor is a residential aspect: its type (town or village) and size, administrative level, role in system of setting, level of territory's arranging. The place of family's residence – large and developed city or periphery and undeveloped settlement- influences on mode of life, leisure and etc. Historic-geographic and ethnic factors are connected with birthplace; is a person is a native or came from other residential place, with person's way of life, traditions [14].

Analyzing factors, which influence on development of different components and general psychological readiness of students for future professional carrier, scientists proved that there is statistically significant connection between social-demographic (including birthplace) and organizational-professional characteristics of students [5].

Influence of climate conditions, place of residence on population's life quality was a subject of research [12], in which it was cleared up that in spite of governmental support these natural factors cause negative changes in health and reduce life quality.

The present research has been fulfilled as per topical plan of scientific-research works of Eastern-European national university, named after Lesya Ukrainka, for 2014.

Purpose, tasks of the work, material and methods

The purpose of the work is researching of influence of students' birthplace on physical and psychological components of health in students' life quality.

The methods and material of the research: in total 513 students of Eastern-European national university, named after Lesya Ukrainka, of Lutsk national technical university and Kherson state university participated in the research. When processing the data, received with the help of questionnaire SF-36 [18, 19], we used appropriate recommendations and instructions [4], on determination of such life quality components as general physical component of health (PCS - physical component summary) and psychological component of health (MCS-mental component summary). Strength of correlation connection was evaluated with the help of Cheddock's table.

Results of the research

Formation of personality of any person, especially young person, is influenced by a complex of factors, which accompany him (her) from very childhood. They are: environment, specificities of life mode, relatives. For analysis of influence of these components on further formation of student's personality and his (her) attitude to own health we conducted research of quality life components depending on students' birthplaces. In total we composed 5 groups: groups of born in cities, in towns, in settlements, in villages. In cities 125 persons were born (24.5%), in towns - 69 persons (13.5%), in settlements - 43 persons (8.5%), in village - 222 (43%) in small towns– 54of the questioned or 10.5 % (see fig. 1)

Concerning gender division of the questioned students: among girls the largest group – 132 (43%) girls – was composed of persons, born in village; nearly quarter of girl students (74 persons) – from cities; practically equal

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quantity of girls were from towns and settlements (39 and 38 accordingly) and the least group was composed from girls, born in small towns– 23 persons (7.5%).

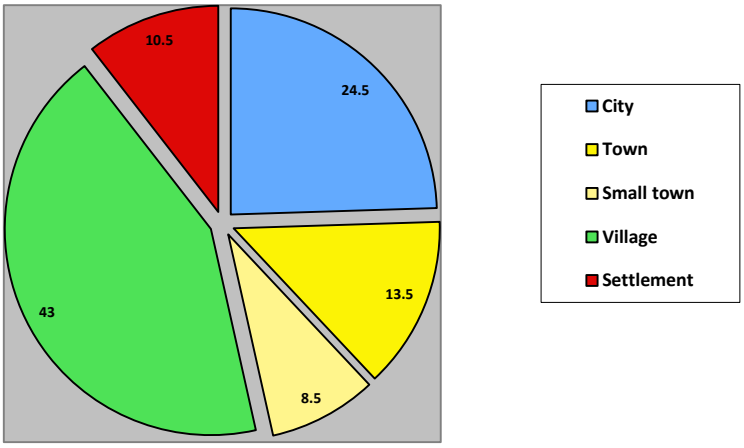

Fig.1. Distribution of students, depending on birthplace %.

The questioned boys were mainly born in village (43%), quarter of the questioned (51 persons) – in cities, nearly15% - in towns, 9.5% of students - in small towns and only 8% - in settlement. Thus, distribution in percentage of both sexes' students, depending on birthplace, is practically equal. See graphs in fig. 2. T

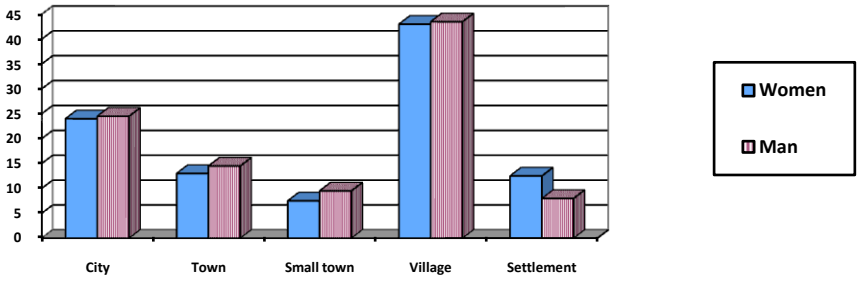

Fig.2. Distribution of students by sex and birthplace, %.

Results of questioning witnessed that the highest students' indicator was indicator of physical functioning (PF), though those, who were born in small town had this indicator the least (80.0 points) comparing with the born in village (90.45), settlement (90.52), town (89.1) or city (91.75). The second place for girls students of all tested groups is taken by indicators of social functioning (SF), which, alongside with indicator of physical functioning, is the least in girl students from small towns (69.56), and the highest in those, who were born in cities (78.37) (see table 1).

Indicators of role functioning, conditioned by physical state (RP) is the highest among girl students from cities (76.01), the second place is taken by girl students from towns (70.51), the third and forth places are taken by girls from settlements and villages (69.07 and 62.12) and the last place – by born in small towns (51.08).

Table 1

Main indicators of physical and mental components of health in students' life quality, depending on birthplace, points

Birthplace	Sex	PF	RP	BP	GH	VT	SF	RE	MH
City	W, n=74	91.75	76.01	74.62	69.2	61.14	78.37	60.36	66.0
	ЧМ n=51	94.90	73.03	74.01	75.74	63.92	78.18	62.09	67.37
	Xc.	93.04	74.8	74.376	71.872	62.28	78.3	61.06	66.56
Town	W, n=39	89.1	70.51	60.92	62.05	56.79	72.43	47.86	62.35
	ЧМ n=30	93.0	65.83	68.86	75.16	64.0	78.33	60.0	72.26
	Xc.	90.79	68.47	64.37	67.75	59.92	75.0	53.14	66.66
Small town	W, n=23	80.0	51.08	66.0	67.73	55.43	69.56	53.62	62.78
	M, n=20	90.5	66.25	71.0	69.35	57.25	80.0	80.0	66.0
	Xc.	84.88	58.13	68.32	68.48	56.27	74.41	56.58	64.27
Settlement	W, n=38	90.52	69.07	72.47	68.63	61.31	75.98	51.75	62.73
	M, n=16	95.0	68.75	80.43	71.37	64.6	78.90	70.83	66.25

	Xc.	91.85	68.98	74.83	69.44	62.31	76.85	57.40	63.77
Village	W, n=132	90.45	62.12	67.03	65.89	56.96	74.24	57.82	64.75
	M, n=90	94.16	71.38	72.01	72.7	68.22	82.77	72.22	71.95
	Xc.	91.95	65.87	69.04	68.65	61.53	77.7	63.66	67.67

Notes: W – women, M – men, Xc. – mean value.

Indicator of intensity of pain (BP) is the most expressed in girl students from cities (74.62) and settlements (72.47), in born in small towns (66.0) and in villages (67.03) these indicators are practically equal and the lowest is in girls students from towns (60.92). General health condition, indicator of which is indicator GH, is the lowest in girl students from towns (62,05); the rest have practically equal indicators.

Girl students' vitality – indicator VT – is practically equally high in girl students from cities (61.14) and settlements (61.31), the lowest is in born in villages (56.96); in the rest students this indicator at middle level. Indicator of role functioning, conditioned by emotional state – RE – being at the same level as VT, is also on the first place for girl students from cities (60.36). The second by value indicator RE is in girl students from villages (57.82), the third and the forth place s are taken by girl students from small towns (53.62) and settlements (51.75) and the fifth place belongs to girl students, born in towns (47.86).

Girl students' indicator of mental health (MH) is practically equal for born in cities (66.0) and villages (64.75) and a little lower for girl students from settlements (62.73), small towns (62.78), towns (62.35). These data are shown in fig. 3.

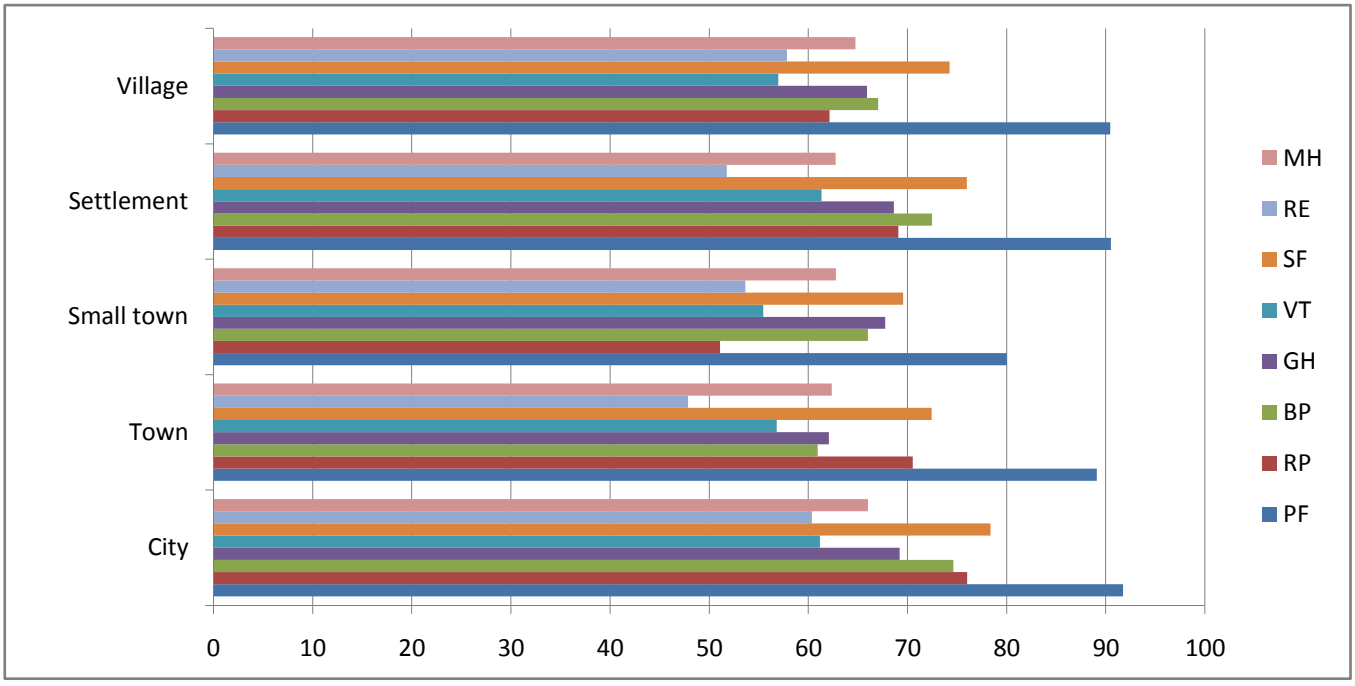

Fig. 3. Components of girl students' life quality depending on birthplace, points.

For boy students the highest, more than 90 points, was indicator of physical functioning (PF) in all tested groups. Indicator of social functioning (SF), was the highest in born in villages (82.77), the second place is taken by students from small towns (80.0). Students from settlement, towns and cities have practically equal indicator of social functioning (78).

Comparing with indicator of girl students, indicator of role functioning, conditioned by emotional state of students (RE), born in small towns is rather high (80.0), lower values belonged to students from village (72.22) and settlements (70.83), the lowest belong to students from towns (60.0) and cities (62.09).

Role activity, conditioned by physical state (RP) was the highest in students from cities (73.03), a little bit lower for students, born in villages (71.38); the rest have practically equal values (65-68). Indicator BP, with reflects intensity of pain, is the highest (80.43) in respondents – boys from settlement; the second place is taken by students from cities - BP= 74.01, the third place was shared by students from village (72.01) and settlement (71.0) and the lowest indicator BP=68.86 belonged to students from towns.

General health (GH) is on equal level in students from cities and towns (75) and students from villages 72.7) and settlements (71.37); the lowest indicator (69.35) belonged to students, born in small towns. MH – indicator of mental health of students, born in villages (71.95) and in towns (72.26) is on the same level; for students, born in settlements, small towns and cities indicator MH is at the lowest level but practically equal (67-66).

Indicator of vitality (VT) is one of factors, which reflects students' self-evaluation of own forces, energy or weakness. The highest indicator belongs to students from villages (68.22), the lowest – to students from small towns (57.25), indicator of the rest is on middle level. It should be noted that this indicator is one of the lowest from all tested indicators in all tested groups. It is a motivation and basis for more detail studying of just this component of health, to seeking of ways of its correction for improvement of rising generation's health in particular and their life quality in general. In fig. 4 we present components of students' life quality, depending on their birthplaces.

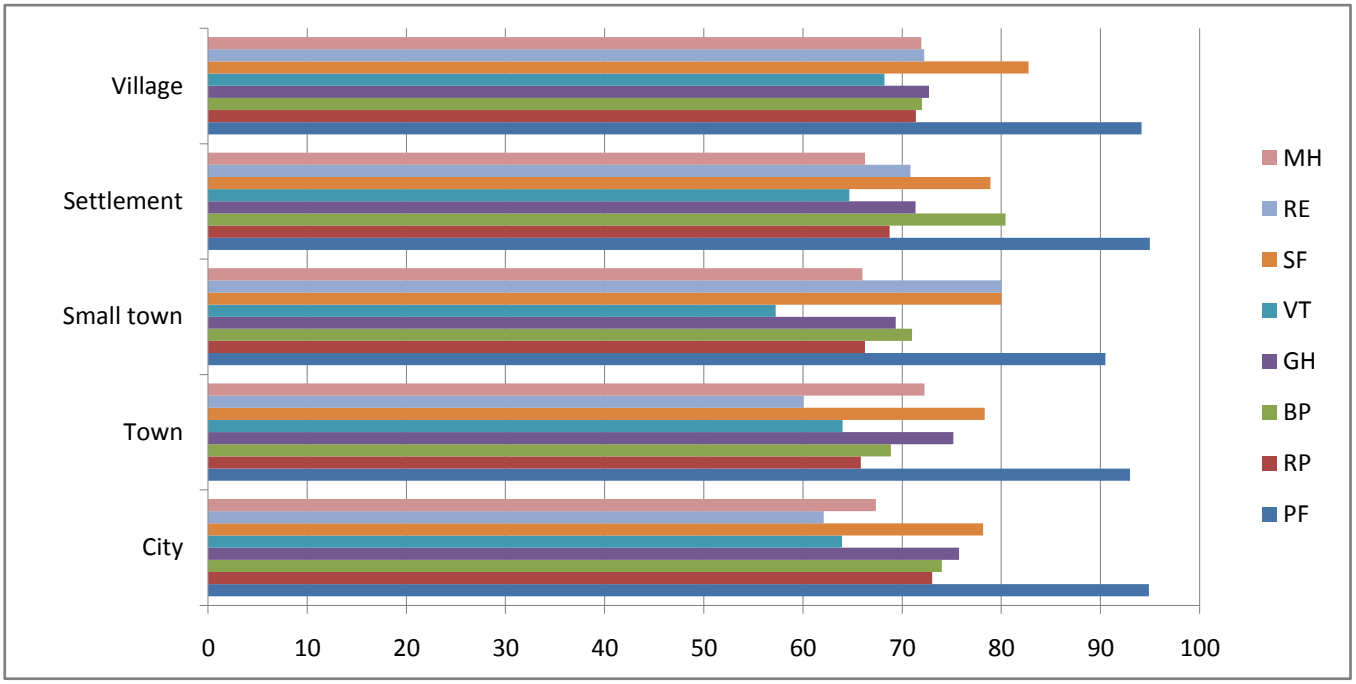

Fig. 4. Components of boy students' life quality depending on birthplace, points.

Generalizing th received data by recommended methodic we obtained two the most important components of life quality: physical component (Physical component summary – PCS) and mental component (Mental component summary – MCS). In all tested groups physical component prevails comparing with mental one that is an evidence of higher students' self-evaluation of physical health instead of mental.

Concerning gender analysis, girl students, independent on birthplace have lower indicators of physical and mental components in comparison with boy students.

Among girl students the highest indicator of health's physical component (PCS) belongs to born in city (52.63) and village (52.23), the second place is taken by girl students from towns and villages (49) and the lowest indicator belong to those, who were born in small towns (47.25).

Among boy students indicators of health's physical component (PCS), distributed practically in the same way as among girls. So, the highest indicator belonged to students from cities (53.4), the second place was taken by students from settlements (52.93), a little bit lower – by students from villages (51.34) and towns (51.05) and the lowest indicator belonged to students from small towns (50.87). The data of physical components of students' life quality (both sexes) are given in fig.5.

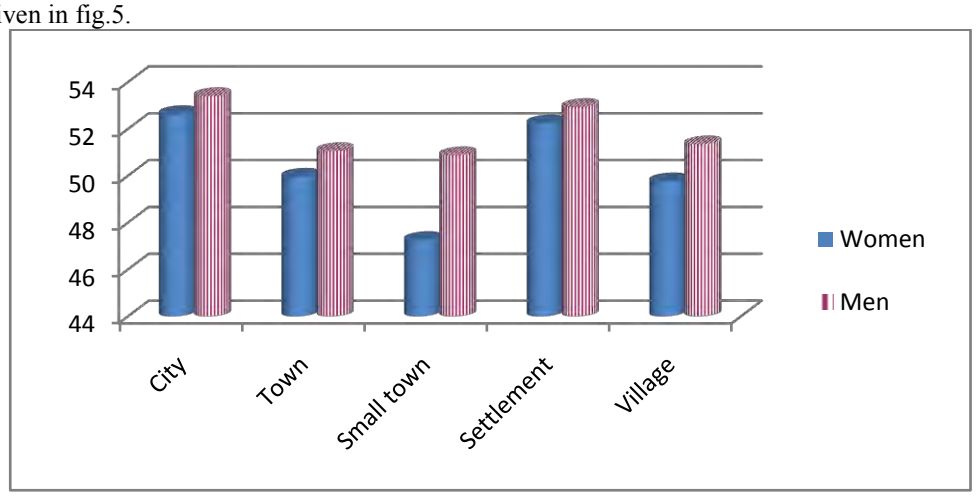

Fig. 5. Physical component of health of students' life quality depending on their birthplace.

Concerning mental component of girl students' life quality (MCS), the highest belong to those, who were born in cities (43.76), a little bit lower – to girl students from village (43.11), still lower – to girl students from small towns (42,77) and the lowest – to girl students from settlements (41.95) and towns (41.02).

Boy students have higher indicators of health's mental component (MCS), in comparison with girl students. For example, the highest indicators of students from village were 48.26; at the second place were students from towns (46.16), at the third place – students from settlements (45.35) and at the last places – students from cities (44.42) and small towns (44.). The data are given in fig. 6.

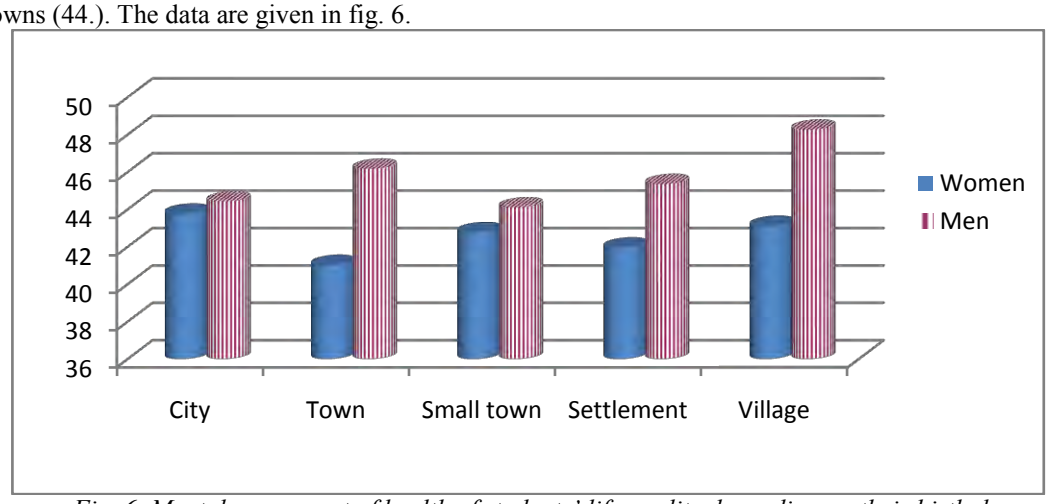

Fig. 6. Mental component of health of students' life quality depending on their birthplace.

Digital values of health's physical and mental components are given in table 2.

Table 2

Health of students' life quality depending on birthplace

Birthplace	Sex	Physical component summary – PCS			Mental component summary – MCS		
		$\overline{X}$	S	$S\overline{x}$	$\overline{X}$	S	$S\overline{x}$
City	W	52.63	6.04	0.7	43.76	9.9	1.15
	M	53.40	6.56	0.91	44.42	10.46	1.46
	Xc.	52.94	6.25	0.55	44.03	10.09	0.9
Town	W	49.96	6.39	1.02	41.02	9.63	1.54
	M	51.05	6.25	1.14	46.16	11.29	2.06
	Xc.	50.44	6.31	0.75	43.26	10.62	1.27
Small town	W	47.25	7.62	1.58	42.77	11.8	2.46
	M	50.87	9.14	2.04	44.1	10.69	2.39
	Xc.	48.93	8.46	1.29	43.39	11.18	1.7
Settlement	W	52.23	5.84	0.94	41.95	9.64	1.56
	M	52.93	5.89	1.47	45.35	10.84	2.71
	Xc.	52.44	5.81	0.79	42.96	10.03	1.36
Village	W	49.76	7.21	0.62	43.11	10.07	0.87
	M	51.34	5.96	0.62	48.26	8.39	0.88
	Xc.	50.40	6.76	0.45	45.2	9.74	0.65

Notes: W – women, M – men, Xc. – mean value.

We have analyzed correlation connections between indicators, which form physical and mental components of health in students' life quality. When interpreting strength of correlation connections we used Cheddock's table. For example it is accepted to note weak correlation (WC) (r=0.10—0.29), moderate correlation (MC) (r=0.30—0.49), significant (SC) – (r=0.50—0.69), strong correlation (SC) - (r=0.70—0.89), very strong correlation (VSC) (r=0.90—0.99). Besides, correlation can be positive and negative. As it is known, negative correlation – is *a feedback between values* – increasing of one value is connected with reduction of other (negative correlation coefficient). Positive correlation – *direct connection* – means that increasing of one value is connected with increasing of other (positive correlation coefficient).

Concerning correlation influence of indicators on formation of health's physical component, in the process of analysis we noticed different direct connections. Moderate connection is present in students of all groups by GH indicator (general health), except students from village, where strength of connection is significant (r=0.6). Significant correlation was also determined by all other indicators in students, born in villages. As far as other groups concern then moderate correlation between indicator PF of born in cities and towns, villages (r=0.5), between indicator RP of students from small towns (r=0.6) were determined. The rest of indicators show strong correlations (see table 3).

Table 3

Correlation of indicators of physical and mental health's components in students' life quality, depending on birthplace

Indicators PCS	Birthplace									
	City		Town		Small town		Settlement		village	
	r	Correlation's level	r	Correlation's level	r	Correlation's level	r	Correlation's level	r	Correlation's level
PF	0.5	SC	0.5	SC	0.7	StC	0.5	SC	0.6	SC
RP	0.7	StC	0.5	SC	0.6	SC	0.7	StC	0.6	SC
BP	0.7	StC	0.7	StC	0.7	StC	0.7	StC	0.6	SC
GH	0.3	MC	0.4	MC	0.4	MC	0.3	MC	0.6	SC
VT	0.7	StC	0.7	StC	0.7	StC	0.7	StC	0.7	StC
SF	0.7	StC	0.7	StC	0.7	StC	0.7	StC	0.7	StC
RE	0.7	StC	0.8	StC	0.7	StC	0.8	StC	0.8	StC
MH	0.8	StC	0.9	MC	0.9	MC	0.8	StC	0.8	StC

Notes: WC- weak correlation; MC- moderate correlation; SC – significant correlation; StC- strong correlation; VSC – very strong correlation.

In influence on formation of health's mental component all indicators are strong, except indicators of mental health (MH) of students, born in towns and small towns (r=0.9).

Conclusions:

Researching students' life quality by SF-36 methodic we found out, that girl students from small towns had the lowest indicator of physical functioning (PF) (80.0), while girl students from cities had the highest indicator (91.75). Concerning boy students the lowest PH indicator belonged also to born in small towns (90.5), though the rest of students had this indicator high and nearly at the same level (93-95).

Health's physical component is higher than mental both in boy students' and in girl-students' groups. Gender difference between health's physical component was the highest in students, born in small towns (boys' PCS=50.87; girls' PCS= 47.25); concerning indicators of health's mental component: boys' MCS=46.16 (born in towns); girls' y MCS=41.02 (also born in towns).

Correlations between indicators, which form health's physical and mental components in students' life quality are higher and, accordingly, they influence stronger on formation of health's mental component.

In the future we intend to research other components, which influence oh youth's quality of life.

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